REMARKS

The present Amendment amends claims 1, 5 and 9. Therefore, the present application has pending claims 1, 5 and 9.

35 U.S.C. §103 Rejections

Claims 1, 5 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,853,630 to Manning in view of U.S. Patent No. 5,383,221 to Akita, et al. ("Akita"). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention, as now more clearly recited in claims 1, 5 and 9, are not taught or suggested by Manning or Akita, whether taken individually or in combination with each other in the manner suggested by the Examiner. Therefore, Applicants respectfully requests the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Specifically, amendments were made to the claims to more clearly recite that the present invention is directed to a communication control method, a communication control system, and as storage medium containing a program operative on a computer to function as a communication control system as recited, for example, in independent claims 1, 5 and 9.

The present invention, as recited in claim 1, and as similarly recited in claims 5 and 9, provides a communication control method for controlling wireless data communication conducted between a portable information communication terminal and a data communication apparatus via a communication network, including a radio communication network. The communication method includes a step of determining a termination situation, when wireless data communication between the portable

information communication terminal and the data communication apparatus has been disconnected, so as to classify the termination situation into "normal termination" or "interrupted line disconnection". A termination situation of "normal termination" indicates that the disconnection was according to normal procedure, whereas a termination situation of "interrupted line disconnection" indicates a disconnection interrupted without the normal procedure. According to the present invention, accounting data is stored for each data communication along with the termination situation. The method also includes a step of checking the stored accounting data to determine whether there is any accounting data for the data communication between the portable information communication terminal and the communication apparatus, for which the termination situation is classified as an interrupted line disconnection, and which occurred within a predetermined time before the normal termination of data communication between the portable information communication terminal and the data communication apparatus. In addition, if accounting data for which the termination situation is classified as an interrupted line disconnection is found in the step of checking, then the method performs the step of clearing the found accounting data in order to avoid charging for the disconnection interrupted without normal procedure. The prior art does not teach or suggest all of these features.

To further illustrate the above features of the present invention, the Examiner's attention is directed to: page 6, lines 3-17; page 20, lines 10-26; page 11, lines 14-19; Fig. 3; and Fig. 7 of the disclosure. As described and shown, the present invention records the accounting data for each data communication, whether it be a normal termination or an interrupted line disconnection due to an abnormal

termination. If a data communication is disconnected due to an abnormal termination, then the data communication is retried. The accounting data is recorded for both the data communication resulting in an abnormal termination and the retried data communication. In the present invention, the accounting data for the data communication resulting in an abnormal termination is canceled, such that a user will not be charged for the abnormally terminated data communication. The prior art does not teach or suggest all of these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Manning or Akita, whether taken individually or in combination with each other.

Manning teaches a method and apparatus for merging accounting records to minimize overhead. However, there is no teaching or suggestion in Manning of the communication control method, a communication control system, and as storage medium containing a program operative on a computer to function as a communication control system as recited in claims 1, 5 and 9 of the present invention.

Manning's method and apparatus for merging accounting records accumulates accounting information for data transmissions between a wireless communication device and a host on a data network. The method and apparatus can accumulate accounting information for short data bursts and for active traffic channel transmissions, such that accounting messages are sent to an accounting server only when transitions from short data burst transmission or active traffic channel transmission to another state are encountered. Therefore, accounting

information for a plurality of sequential short data bursts and/or active traffic channel transmissions are accumulated. This reduces the number of accounting messages sent to an accounting server and eliminates race conditions that may be encountered by sequential short data bursts.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 5 and 9 includes determining a termination situation, when wireless data communication between the portable information communication terminal and the data communication apparatus has been disconnected, so as to classify the termination situation into "normal termination" or "interrupted line disconnection". A termination situation of "normal termination" indicates that the disconnection was according to normal procedure, whereas a termination situation of "interrupted line disconnection" indicates a disconnection interrupted without the normal procedure. According to the present invention, accounting data is stored for each data communication along with the termination situation. Manning does not disclose this feature. More specifically, Manning does not disclose determining a termination situation, or classifying a termination situation into either a normal termination or an interrupted line disconnection. The teachings of Manning are merely directed to normal terminations as described, for example, in column 5, lines 32-60. Manning describes a "connection release record" that is generated when the wireless communication network releases communication with the data network (column 5, lines 38-40). Manning further describes where after such release record is received, a usage data record (UDR) I transmitted to an account server (column 5, lines 54-56). In addition, Manning describes where a UDR for the session is created upon receipt of a session setup record, and information for the session is maintained in the

UDR until a session release record is received (column 6, lines 24-28). These disclosed features of Manning represent normal termination procedures. As such, there is no teaching or suggestion in Manning of distinguishing between normal and abnormal terminations, as in the present invention, "so as to classify the termination situation into normal termination or interrupted line disconnection" in the manner claimed.

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 5 and 9, includes checking the stored accounting data to determine whether there is any accounting data for the data communication between the portable information communication terminal and the communication apparatus, for which the termination situation is classified as an interrupted line disconnection, and which occurred within a predetermined time before the normal termination of data communication between the portable information communication terminal and the data communication apparatus. Manning does not disclose this feature. As previously discussed, Manning does not teach or suggest distinguishing between normal and abnormal terminations, as in the present invention. Therefore, it follows that Manning does not teach or suggest checking the stored accounting data to determine whether there is any accounting data for which the termination situation is classified as an abnormal termination, or an "interrupted line disconnection" as claimed. Furthermore, as conceded by the Examiner, Manning does not teach where an interrupted data communication was interrupted within a predetermined time before the normal termination of data communication.

Yet another feature of the present invention, as recited in claim 1, and as similarly recited in claims 5 and 9, includes where if accounting data for which the

termination situation is classified as an interrupted line disconnection is found in the step of checking, then the method performs the step of clearing the found accounting data in order to avoid charging for the disconnection interrupted without normal procedure. Manning does not disclose this feature. As previously discussed, Manning does not teach or suggest distinguishing between normal and abnormal terminations, as in the present invention. Therefore, it follows that Manning does not teach or suggest clearing accounting data for which the termination situation is classified as an interrupted line disconnection, in the manner claimed. More specifically, Manning merely discloses where usage data records are no longer maintained by an accounting controller once a session release record is received (column 6, lines 24-28). Manning does not teach or suggestion where this session release record is generated in response to an abnormal termination, as claimed. As such, Manning does not disclose the claimed feature.

Therefore, Manning fails to teach or suggest "determining a termination situation, when wireless data communication between said portable information communication terminal and said data communication apparatus has been disconnected, so as to classify the termination situation into normal termination, which is a disconnection according to normal procedure, or interrupted line disconnection, which is a disconnection interrupted without normal procedure, wherein accounting data is stored for each data communication with the termination situation" as recited in claim 1, and as similarly recited in claims 5 and 9.

Furthermore, Manning fails to teach or suggest "checking the stored accounting data to determine whether there is any accounting data on the data communication between said portable information communication terminal and said

data communication apparatus, for which the termination situation is classified as interrupted line disconnection, and which occurred within a predetermined time before the normal termination of data communication between the portable information communication terminal and the data communication apparatus" as recited in claim 1, and as similarly recited in claims 5 and 9.

Even further, Manning fails to teach or suggest "if accounting data for which the termination situation is classified as interrupted line disconnection is found in the checking step, clearing the found accounting data to avoid charging for the disconnection interrupted without normal procedure" as recited in claim 1, and as similarly recited in claims 5 and 9.

The above noted deficiencies of Manning are not supplied by any of the other references of record, namely Akita, whether taken individually or in combination with each other. Therefore, combining the teachings of Manning and Akita in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Akita teaches a mobile station unit and a channel switching method. However, there is no teaching or suggestion in Akita of the communication control method, a communication control system, and as storage medium containing a program operative on a computer to function as a communication control system as recited in claims 1, 5 and 9 of the present invention.

Akita discloses a mobile radio system including at least one mobile station unit and a plurality of base station units. The mobile station unit communicates with a base station through time-division multiplexed control and communication channels. The mobile station unit includes a line quality detecting section for

detecting the deterioration of the line quality occurring during communication, and a control section for controlling the entire unit. The control section includes a retrieval section, which when the deterioration of the line quality is detected by the line quality detecting section, interrupts current communication with a base station unit during a predetermined period, receives a control channel from another (new) base station unit during that period, and then retrieves predetermined information. The control section also includes a channels switching section, which when the predetermined information can be detected by the retrieval section, terminates the current communication with the base station and performs a process of connection to the new base station unit on the basis of the predetermined information.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 5 and 9 includes determining a termination situation, when wireless data communication between the portable information communication terminal and the data communication apparatus has been disconnected, so as to classify the termination situation into "normal termination" or "interrupted line disconnection". A termination situation of "normal termination" indicates that the disconnection was according to normal procedure, whereas a termination situation of "interrupted line disconnection" indicates a disconnection interrupted without the normal procedure. According to the present invention, accounting data is stored for each data communication along with the termination situation. Akita does not disclose this feature. First, there is no teaching or suggestion in Akita of where accounting data is stored for each data communication along with each termination situation. In addition, Akita does not teach or suggest determining a termination situation when wireless data communication between a portable information communication

terminal and the data communication apparatus has been disconnected, as in the present invention. For example, as described in column 7, lines 52 to column 8, line 4, Akita discloses where a mobile station unit is equipped with a line quality detecting section, which detects the deterioration of the line quality during communication, and a retrieval section, which when the deterioration of the line quality is detected, interrupts communication with a base station during a predetermined period. This detection and subsequent interruption disclosed in Akita is part of the normal termination procedure for Akita. This is not an interrupted line disconnection resulting from an abnormal termination procedure, in the manner claimed.

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 5 and 9, includes checking the stored accounting data to determine whether there is any accounting data for the data communication between the portable information communication terminal and the communication apparatus, for which the termination situation is classified as an interrupted line disconnection, and which occurred within a predetermined time before the normal termination of data communication between the portable information communication terminal and the data communication apparatus. Akita does not disclose this feature. More specifically, as previously discussed, Akita does not disclose storing accounting data, and further does not disclose determining a termination situation. Therefore, there is no teaching or suggestion in Akita of checking the stored accounting data in the manner claimed. Furthermore, although the Examiner relies upon Akita for teaching the disconnection of a communication line if the interrupted data communication was interrupted within a predetermined time before the normal termination of data communication (citing column 7, line 52 to column 8, line 4),

neither the cited text nor any other portions of Akita teach or suggest checking stored accounting data for the data communication which occurred within a predetermined time before the normal termination of data communication. As described in the cited text, Akita merely discloses interrupting communication with the base station connecting unit during a predetermined period. There is no teaching or suggestion that this predetermined period is a predetermined time before a normal termination of data communication, as in the present invention.

Yet another feature of the present invention, as recited in claim 1, and as similarly recited in claims 5 and 9, includes where if accounting data for which the termination situation is classified as an interrupted line disconnection is found in the step of checking, then the method performs the step of clearing the found accounting data in order to avoid charging for the disconnection interrupted without normal procedure. Akita does not disclose this feature. As previously discussed, Akita does not disclose a step of storing accounting data. Accordingly, Akita does not teach or suggestion clearing accounting data, in the manner claimed.

Therefore, Akita fails to teach or suggest "determining a termination situation, when wireless data communication between said portable information communication terminal and said data communication apparatus has been disconnected, so as to classify the termination situation into normal termination, which is a disconnection according to normal procedure, or interrupted line disconnection, which is a disconnection interrupted without normal procedure, wherein accounting data is stored for each data communication with the termination situation" as recited in claim 1, and as similarly recited in claims 5 and 9.

Furthermore, Akita fails to teach or suggest "checking the stored accounting data to determine whether there is any accounting data on the data communication between said portable information communication terminal and said data communication apparatus, for which the termination situation is classified as interrupted line disconnection, and which occurred within a predetermined time before the normal termination of data communication between the portable information communication terminal and the data communication apparatus" as recited in claim 1, and as similarly recited in claims 5 and 9.

Even further, Akita fails to teach or suggest "if accounting data for which the termination situation is classified as interrupted line disconnection is found in the checking step, clearing the found accounting data to avoid charging for the disconnection interrupted without normal procedure" as recited in claim 1, and as similarly recited in claims 5 and 9.

Both Manning and Akita suffer from the same deficiencies relative to the features of the present invention, as recited in the claims. Therefore, combining the teachings of Manning and Akita in the manner suggested by the Examiner does not render obvious the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 1, 5 and 9 as being unpatentable over Manning in view of Akita are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 1, 5 and 9.

In view of the foregoing amendments and remarks, Applicants submit that claims 1, 5 and 9 are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.40462X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

Donna K. Mason

Donna K. Mason
Registration No. 45,962

CIB/DKM/cmd
(703) 684-1120